Intelligent Switching
for the **Evolving** Network

Competitive Cross-Reference Sales Tool

Cisco Catalyst® 2950 Series Switches vs. HP Procurve 2500/4000M/4108gl Switches

Cisco delivers superior availability, security, and quality of service features than HP—for greater overall value.

Business networks face new demands every day—desktop computing power is rising, bandwidth-hungry applications are multiplying, the volume of sensitive data is expanding, and companies are deploying IP phones, wireless access points, and other devices on the LAN.

As a result, networks must meet new, higher standards for network availability, security, and control via advanced quality of service (QoS). The Cisco Catalyst 2950 Series offers all that and more, delivering intelligent services to the network edge.

Following are just a few of the reasons why the Cisco Catalyst 2950 Series is a better choice than comparable Hewlett-Packard products:

Hewlett-Packard Weaknesses

- The implementation of QoS on the HP Procurve platform does not allow administrators to discriminate in scheduling and prioritizing traffic and allocating bandwidth—particularly important in networks that support IP telephony.
- HP Procurve switches do not support security filtering, MAC aging, MAC address notification, and private VLAN edge features, limiting the level of protection against internal and external threats.
- Implementation of Spanning-Tree Protocol on Procurve switches lacks elements that provide faster failover and greater redundancy—features such as PVST+, BackboneFast, and CrossStack UplinkFast.

Cisco Catalyst 2950 Series Switches Offer More

Superior Availability
Ensures employees can access data at all times, locally and remotely

More features to increase network uptime and employee productivity, including:
- Spanning-Tree Protocol (STP) enhancements such as PortFast, UplinkFast, CrossStack UplinkFast, BackboneFast, and 802.1s for faster uplink failover recovery
- Per-VLAN Spanning-Tree Protocol Plus (PVST+) allows for load sharing across uplinks, doubling available bandwidth
- Voice VLAN capabilities enable all voice traffic to be carried on a VLAN designated for IP telephony, simplifying IP phone installation and network administration and troubleshooting

Enhanced Security
Protects data across the network from internal and external threats

More features to mitigate internal security concerns and protect partner/customer interactions, including:
- Filtering incoming traffic flows on port basis in hardware based on Layer 2/3/4 access control parameters (ACPs) to prevent unauthorized users from accessing restricted network areas (EI versions only)
- Port security prevents unauthorized users from accessing the network by limiting the number of MAC addresses allowed per port; an aging feature is used to remove MAC addresses after a specified time to allow another device to connect to the same port
- Private VLAN edge provides security and isolation between ports on a switch, ensuring that voice traffic travels directly from its entry point to the aggregation device through a virtual path and cannot be directed to a different port
- MAC address notification allows administrators to be notified of new users added and removed from the network (EI versions only)

Advanced Quality of Service
Prioritizes critical traffic and applications to get the most out of available bandwidth

More features to improve network efficiency and lower administration costs, including:
- Additional egress (outgoing) queues and Weighted Round Robin (WRR) allow network administrators to be more discriminating and specific when making scheduling/priority decisions on outgoing packets
- Rate limiting ensures that the appropriate amount of bandwidth is allocated to each user, allowing administrators to prioritize traffic for certain users

Easier Management
Simplifies and greatly streamlines network management tasks

More features to save time and resources with Cisco Cluster Management Suite (CMS) Software, which allows users to configure, troubleshoot, and perform software upgrades on multiple switches at once via a standard Web browser.

Other features include:
- Topology maps for a comprehensive layout of all clustered switches
- Link graphs and reports for real-time traffic updates
- Configuration templates and guide modes to minimize training
- And Cisco CMS is embedded in the switch—no installation is required

Investment Protection with Cisco Catalyst Switches

Cisco network platforms running Cisco IOS® Software form a unified system, providing a firm foundation for building Internet applications, while reducing training, management, and troubleshooting costs.

In addition:
- Cisco is the worldwide leader in switching, offering scalable, end-to-end networking solutions to meet the needs of enterprise customers both today and tomorrow.
- Cisco develops innovative technology such as TACACS+, enhanced Spanning-Tree Protocol, Cisco Fast EtherChannel® and Gigabit EtherChannel technology, and Cisco Discovery Protocol, which have been adopted by the industry and Cisco competitors.

Cisco Catalyst 2950 Series Switches vs. HP Procurve 2500/4000M/4108gl Switches

		Cisco 2950-12/24 Switches (Standard Image)	Cisco 2950 G/T/C Switches (Enhanced Image)	HP Procurve 2500 Switches	HP Procurve 4000M Switches	HP Procurve 4108gl Switches
	Configuration Information	12 or 24 fixed 10/100 ports, wire-speed standalone switch	12, 24, or 48 fixed 10/100 ports with 2 GBIC ports or 24 fixed 10/100 ports with 2 1000BASE-T or 100BASE-FX ports, wire-speed standalone switch	12 or 24 fixed 10/100 ports, standalone with 2 open transceiver slots	40-port chassis-based 10/100 switch with 5 open module slots	8-slot chassis with option of 3-slot transceiver module for uplinks
Availability	**Redundancy**					
	Spanning-Tree Protocol (802.1d)	Yes	Yes	Yes	Yes	Yes
	PortFast	Yes	Yes	Yes	Yes, fast mode	Yes, fast mode
	UplinkFast	Yes	Yes	Yes	Yes, switch meshing	No
	CrossStack UplinkFast	No	Yes (G)	No	N/A	N/A
	BackboneFast	Yes	Yes	No	Yes, switch meshing	No
	Rapid Spanning-Tree Protocol (802.1w)	No	Yes	Yes	No	Yes
	Multiple Spanning Tree (802.1s)	No	Yes	No	No	No
	Per-VLAN Spanning Tree Plus (PVST+)	Yes	Yes	No	No	No
	Multicast Management					
	IGMP (Internet Group Management Protocol) snooping	Yes	Yes	Yes, limited	Yes	Yes
	Immediate leave, fast join	Yes	Yes	No support for immediate leave	No support for immediate leave	No support for immediate leave
	Bandwidth Optimization					
	Cisco Fast/Gigabit EtherChannel	Yes, up to eight ports	Yes, up to eight ports	Yes, up to four ports	Yes, up to four ports	Yes, up to four ports
	VLAN Trunking Protocol (VTP) pruning	Yes	Yes	No	No	No
	Voice VLAN	Yes	Yes	No	No	No
	Dynamic VLAN assignment	Yes	Yes	Yes	No	Yes
	Dynamic Trunking Protocol (DTP)	Yes	Yes	Yes	No	Yes
	Multicast VLAN Registration	Yes	Yes	No	No	No
Quality of Service	802.1p class of service (CoS)	Yes	Yes	Yes	Yes	Yes
	DiffServ Code Point (DSCP)/ type of service (ToS)	No	Yes	No	No	No
	Number of egress queues per port	Four	Four	Two	Two	Two
	Rate limiting	No	Yes	No	No	No
	Weighted Round Robin (WRR)	Yes	Yes	No	No	No
	Strict priority scheduling	Yes	Yes	Yes	Yes	Yes
	Configurable CoS to queue mapping	Yes	Yes	No	No	No
Security	Security filtering	No	Yes	No	No	No
	802.1x authentication	Yes	Yes	Yes	No	Yes
	Port security, MAC aging	Yes	Yes	Yes, but no MAC aging	Yes, but no MAC aging	Yes, but no MAC aging
	MAC address notification	Yes	Yes	No	No	No
	Private VLAN Edge	Yes	Yes	No	No	No
	TACACS+ and RADIUS	Yes	Yes	Yes	Yes (TACACS+)	Yes
	Multilevel console security	Yes	Yes	No	Yes	Yes
	Secure Shell (SSH) and SNMPv3	No	Yes	Yes	No	Yes
Web Management	**Web Management**					
	Single IP Management for a virtual stack of up to 16 switches	Yes, with Cisco CMS	Yes, with Cisco CMS	Yes	Yes	Yes
	Cluster upgrade	Yes, with Cisco CMS	Yes, with Cisco CMS	No	No	No
	Topology maps with IP phone discovery and wireless AP management integration	Yes, with Cisco CMS	Yes, with Cisco CMS	No	No	No
	Multiple device and port management configuration in minutes	Yes, with Cisco CMS	Yes, with Cisco CMS	No	No	No
	Configuration templates, guide modes, and embedded help	Yes, with Cisco CMS	Yes, with Cisco CMS	No	No	No
	Solution wizards for easy deployment of voice, video, and priority data in the network	Yes, with Cisco CMS	Yes, with Cisco CMS	No	No	No

For more information

www.cisco.com/go/catalyst2950

CISCO SYSTEMS

Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www.cisco.com
Tel: +31 (0)20 357 1000
Fax: +31 (0)20 357 1100

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 305 718-2600
Fax: 305 718-2699

Asia Pacific Headquarters
Cisco Systems, Inc.
Capital Tower
168 Robinson Road
#22-01 to #29-01
Singapore 068912
www.cisco.com
Tel: +65 317 7777
Fax: +65 317 7799

Cisco Systems has more than 200 offices. Addresses, phone numbers, and fax numbers are listed on the Cisco.com Web site at www.cisco.com/go/offices.

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